Project Proposal

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Submitted To:

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Project Overview:

Project Title: **AI-Based Interior Design**

Project Introduction:

The AI-Based Interior Design project aims to bring innovation to the field of interior decoration by combining artificial intelligence with aesthetic design principles. This tool will enable users, particularly office owners and interior decorators, to visualize different design options, optimize space, and incorporate modern design elements with ease. By utilizing Generative AI, the app will generate design layouts, furniture suggestions, and color palettes based on user input and preferences.

Objectives:

→ To create an AI-powered platform that provides personalized interior design recommendations.
→ To integrate pre-trained models for generating room layout options and furniture arrangements.
→ To allow users to see multiple design simulations and choose the best option for their needs.
→ To leverage LangChain to support interactive dialogue, allowing users to refine their choices iteratively.

Key Features:

→ Room Layout Simulation: Users will be able to see various room layout configurations to optimize their space.
→ Furniture and Décor Suggestions: Based on user input, the AI will suggest furniture styles, placement options, and décor that aligns with modern design trends.
→ 3D Visualization (Optional): If feasible, the platform could include a 3D component for enhanced visual understanding of proposed changes.
→ Generative AI for Design Recommendations: The system will use LangChain to refine design options based on user feedback.

Expected Outcome:

This project will revolutionize the approach to interior design by providing a simple yet powerful AI tool that simplifies decision-making for space optimization and aesthetic coherence. Users will gain confidence in their design choices and visualize final results before implementation.

Implementation Plan:

→ Phase 1: Requirement Gathering and Feasibility Analysis (1 Month)
→ Phase 2: Design Prototyping and AI Model Integration (2 Months)
→ Phase 3: Generative AI and Interactive Feedback Integration (3 Months)
→ Phase 4: User Testing and Iterative Enhancements (2 Months)
→ Phase 5: Final Review and Submission (1 Month)